

ATTACHMENT 1

Chains-of-Custody and Test Reports for Vermiculite Samples Collected on October 27, 2011.

INTERNAL CHAIN OF CUSTODY

10/27/2011 2:47:07 PM

Order ID: 271101481

Attn: Robert Marriam
Remedium Group, Inc.
Subsidiary of W.R. Grace
6401 Poplar Avenue, Suite 301
Memphis, TN 38119

Fax: (901) 820-2061 Phone: (901) 820-2023

Project: Sample Retrieval Below Amphitheater

Customer ID: REME44

Customer PO:

Received: 10/27/11 1:07 PM

EMSL Order: 271101481

EMSL Proj ID: OU3 Mine, Libby, MT

Cust COC ID

Test: PLM NIOSH 9002

Matrix Soils

TAT: 6 Hour

Qty: 3

Acct Sts: N30

Slsprsn: rdemalo

Logged: rmahoney

Date: 10/27/2011

Inter-Lab Sample Transfer

Samples Relinquished: _____ Date _____

Samples Received: _____ Date _____

Package Mailed to Westmont: _____ Date _____

Method of Delivery: _____

Includes: (Circle)

Benchsheets Sample Slides Sample filters
Micrographs GridBox Other _____

Final Package Received: _____ Date: _____

Sample

☒ Acceptable

Condition:

☐ Unacceptable

Comments

Initial Prep (Initials/Lab): KC Date: 10/27/11

Filter Prep (Initials/Lab): _____ Date: _____

Grid Prep (Initials/Lab): _____ Date: _____

For Special Projects Use Only:

QC Selection: _____ Date: _____

Date Package Review: _____ Date: _____

Date Package Mailed: _____ Date: _____

Special Instructions

Order ID	Lab Sample #	Cust. Sample #	Location	Due Date
271101481	271101481-0001	1	N.W. Corner	10/27/2011 7:07:00 PM
271101481	271101481-0002	2	Next to ISCO	10/27/2011 7:07:00 PM
271101481	271101481-0003	3	S.E. Corner	10/27/2011 7:07:00 PM



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

271101481

REME 44

EMSL ANALYTICAL, INC.
107 W. FOURTH ST.
LIBBY, MT 59923
PHONE: (406) 293-9066
FAX: (406) 293-7016

Company: CHAPMAN CONSTRUCTION		EMSL-Bill to: <input type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: P.O. BOX 516		Third Party Billing requires written authorization from third party	
City: LIBBY, MONTANA	State/Province: MT	Zip/Postal Code: 59923	Country: USA
Report To (Name): MIKE CHAPMAN		Fax #: 406-293-8305	
Telephone #: 406-293-1983		Email Address: chapman@montanasky.net	
Project Name/Number: SAMPLE RETRIEVAL BELOW AMPHIBOLITE			
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Purchase Order:		U.S. State Samples Taken:	
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hour <input checked="" type="checkbox"/> 6 Hour <input type="checkbox"/> 24 Hour <input type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week			
*For TEM Air 3 hours/6 hours, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.			
PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA		TEM - Air <input type="checkbox"/> 4-4.5hr TAT (AHERA only) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312	
PLM - Bulk (reporting limit) <input type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) <input type="checkbox"/> NYS 198.1 (friable in NY) <input type="checkbox"/> NYS 198.6 NOB (non-friable-NY) <input type="checkbox"/> NIOSH 9002 (<1%)		TEM - Bulk <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP <input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5 TEM - Water: EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	
		TEM - Dust <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)	
		Soil/Rock/Vermiculite <input type="checkbox"/> PLM CARB 435 - A (0.25% sensitivity) <input type="checkbox"/> PLM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - C (0.01% sensitivity) <input type="checkbox"/> EPA Protocol (Semi-Quantitative) <input type="checkbox"/> EPA Protocol (Quantitative)	
		Other: <input type="checkbox"/>	
<input type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group			
Samplers Name: MIKE CHAPMAN		Samplers Signature: <i>[Signature]</i>	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
#1	N.W. Corner		10/27/11 - 12:15 p.m.
#2	Next to Isco		10/27/11 - 12:20 p.m.
#3	South East Corner		10/27/11 - 12:25 p.m.
Client Sample # (s):		Total # of Samples: 3	
Relinquished (Client): <i>[Signature]</i>		Date: 10-27-11	Time: 1:07
Received (Lab): <i>[Signature]</i>		Date: 10/27/11	Time: 1:07
Comments/Special Instructions:			

**EMSL Analytical, Inc.**

107 West 4th Street, Libby, MT 59923

Phone: (406) 293-9066 Fax: Email: mobileasbestoslab@emsl.com

Attn: **Robert Marriam**
Remedium Group, Inc.
Subsidiary of W.R. Grace
6401 Poplar Avenue, Suite 301
Memphis, TN 38119

Customer ID: REME44
Customer PO:
Received: 10/27/11 1:07 PM
EMSL Order: 271101481

Fax: (901) 820-2061 Phone: (901) 820-2023
Project: **Sample Retrieval Below Amphitheater**

EMSL Proj: OU3 Mine, Libby, MT
Analysis Date: 10/27/2011

**Test Report: Polarized Light Microscopy (PLM) Performed
by Modified NIOSH Method 9002, Issue 2**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1 271101481-0001	N.W. Corner	Tan, Black Fibrous Homogeneous		85% Mica 11% Non-fibrous (other)	4% Tremolite/ Actinolite
			QC Type: Not QC Lab ID: EMSL27		
2 271101481-0002	Next to ISCO	Tan Non-Fibrous Homogeneous		95% Mica 2% Non-fibrous (other)	3% Tremolite/ Actinolite
			QC Type: Not QC Lab ID: EMSL27		
3 271101481-0003	S.E. Corner	Tan, Black Non-Fibrous Homogeneous		94% Mica 2% Non-fibrous (other)	4% Tremolite/ Actinolite
			QC Type: Not QC Lab ID: EMSL27		

Initial report from 10/27/2011 16:12:59

Analyst(s)

Kelly Colberg (3)

R. K. Mahoney, Laboratory Manager
or other approved signatory

Disclaimers: This report format for the NIOSH 9002 method has been modified to report discreet asbestos concentrations instead of ranges. PLM has been known to miss asbestos in a small percentage of samples which contain asbestos. Thus negative PLM results cannot be guaranteed. EMSL suggests that samples reported as <1% or none detected be tested with either SEM or TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL. The above test must not be used by the client to claim product endorsement by NVLAP nor any agency of the United States Government. Laboratory is not responsible for the accuracy of results when requested to physically separate and analyze layered samples. The test results contained within this report meet the requirements of NELAC unless otherwise noted. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Libby, MT

**Polarized Light Microscopy (PLM) Performed
by Modified NIOSH Method 9002, Issue 2**

Client: Remedium Group, Inc.

Logged: 10/27/11

TAT: 6 Hour

Address: Subsidiary of W.R. Grace
6401 Poplar Avenue, Suite 301
Memphis, TN 38119

Date/Time Due: 10/27/2011 7:07:00 PM

Fax: (901) 820-2061

Project: OU3 Mine, Libby, MT
Sample Retrieval Below Amphitheater

Special Instructions

Order Number

271101481

Macroscopic		Treatment		COMPONENT TYPES						MICROSCOPIC			
COLOR (C)				Asbestos		Fibrous		Non-Fibrous		Optical Properties			
1 Brown	4 White	7 Black		1 Chrysotile		7 Cellulose		14 Quartz		Morphology (M)		Sign of Elongation (S)	
2 Gray	5 Red	8 Silver		2 Amosite		8 Glass		15 Mica		1 Wavy	6 Scaled	1 +	
3 Tan	6 Various	9 Blue		3 Anthophyllite		9 Min. Wool		16 Gypsum		2 Straight	7 Pitted	2 -	
		10 Yellow		4 Tremolite		10 Synthetic		17 Cal. Carbonate		3 Uniform Diameter	8 Media	3 Variable	
				5 Heated		11 Other		18 Matrix		4 Ribbon-Like	9 Exotic Shapes		
				6 Melted		12 Wollastonite		19 Perlite		5 Tapered Ends	10 Other		
						13 Hair		20 Other		Pleochroism (P)		Fiber Color (FC)	
										1 Yes	1 Low 0.010	1 White	1 Parallel
										2 No	2 Med 0.010-0.030	2 Brown	2 Symmetrical
											3 High >0.050	3 Beige	3 Oblique
											4 None 0.00 or Isotropic	4 Blue	4 Uniaxial
												5 Green	
												6 Colorless	
TEXTURE (T)													
1 Fibrous	2 Non-Fibrous	3 Other											
HOMOGENEITY (H)													
1 Homogeneous	3 OTHER												
2 Heterogeneous	4 Layers (#)												
Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	%	Non-Fibrous Type	%	Non-Asb Char.	Optical Properties		
1	(C) 3.7 (T) 1 (H) 1	2, 1	4	4/5	4			20	11		1.630 R.I.	1.637 R.I.	
								15	85		2 M	1 S	
2	(C) 3 (T) 2 (H) 1	2, 1	3	4/5	3			20	23 total		1.625 R.I.	1.631 R.I.	
								15	95		2 M	1 S	
3	(C) 3.7 (T) 2 (H) 1	2, 1	4	4/5	4			20	2		1.625 R.I.	1.633 R.I.	
								15	94		2 M	1 S	
	(C) (T) (H)							20			⊥ R.I.	R.I.	
											M	S	
												E	
	(C) (T) (H)											R.I.	
												S	
												(FC)	
											P	B	E
	(C) (T) (H)											R.I.	
												S	
												(FC)	
											P	B	E
	(C) (T) (H)											R.I.	
												S	
												(FC)	
											P	B	E
	(C) (T) (H)							20			⊥ R.I.	R.I.	
											M	S	
												(FC)	
											P	B	E
	(C) (T) (H)							20			⊥ R.I.	R.I.	
											M	S	
												(FC)	
											P	B	E

Samples 1 & 3 are relatively the same coarseness, micas range in size from 3 mm to 1 cm, Libby Amphibole bundles in these two samples are similar in size as well; none were larger than about 7 mm in length.

Sample 1 contains feldspar and diopside along with vermiculite & biotite and Libby Amphibole. Feldspars were not observed in Sample 3.

Sample 2 is fine in texture & consisting primarily of vermiculite. The Libby Amphibole bundles are small and fine, for none greater than 5 mm in length.

The vermiculite ranges in size from 2 mm to 4 mm.

Analyst: K Colberg Date: 10/27/11 Computer: _____ Date: _____
Room Temp (C): 21.2 EMSL Analytical, Inc., 107 West 4th Street, Libby, MT 59923 PLM7.9.0

Instructions: All applicable data package deliverables are included in the following page. Using the print option will print out all forms necessary and in the appropriate order. Please provide information as directed.

Laboratory Name: EMSL Analytical, Inc.
City/State: Libby, MT
Laboratory Job No.: 271101481
Method Utilized (SOP and Rev. No.): NIOSH Method
Circle One: Visual Estimation NIOSH 9002 Point Counting Approach

Instructions: For PLM analytical results raw data packages, complete and sign the following checklist. Attach supporting documentation as outlined below. Organize the supporting documentation in the order listed below. Paginate the completed raw data package.

		Laboratory Verification (Initials and Date)	Validator Verification (Initials and Date)
1	<u>Number of samples received: 3</u> <i>An SDG is defined as no more than 100 samples.</i> Additional Supporting Documentation: Attach COC forms having footer R (report).	KC10/27/11	
2	<u>Date of sample receipt and condition of samples</u> 10/27/2011 OK <i>For Condition of samples enter "OK" or "See SDG Case Narrative".</i>	KC10/27/11	
3	<u>SDG Case Narrative:</u> Additional Supporting Documentation: Attach SDG Narrative and any modification forms.	KC10/27/11	
4	<u>Check for contamination (daily):</u> Wipe microscope slides with lens paper before using. <i>Laboratory Verification initial and date signifies that this has been performed for the samples in this SDG.</i>	KC10/27/11	
5	<u>Verification of the refractive indices of the refractive index liquids once per month:</u> Additional Supporting Documentation: Provide information indicating a <u>monthly</u> record of checking each of the four liquids including liquid name, lot number and analyst initials. (See table - Results of RI Liquids Calibration)	KC10/27/11	
6	<u>Verification of microscope adjustments prior to each SDG:</u> <i>Laboratory Verification initial and date signifies that this has been performed for the samples in this SDG.</i>	KC10/27/11	
7	<u>Hard copy data forms (as presented in the EDD spreadsheet):</u> Additional Supporting Documentation: Copies of the Hard Copy Data Forms for all investigative samples and laboratory duplicates will be provided from systems that are entered electronically.	KC10/27/11	
8	<u>Bench sheets for data results:</u> Additional Supporting Documentation: Provide copies of the hand written or LIMS system generated raw data sheets for sample results.	KC10/27/11	

ATTACHMENT 2

Field Sample Data Sheet for Confirmation Soil Sampling

LIBBY OU3 PHASE FIELD SAMPLE DATA SHEET

CONFIRMATION SOIL SAMPLES

Station ID: _____

Sampling Date: _____

Field Logbook ID: _____

Logbook Page No: _____

For New Stations Only: X coord: _____ Y coord: _____ Elev: _____GPS Coordinate System: UTM Zone 11 North, NAD83 datum, metersSampling Team: **MWH** Samplers Initials: _____

Index ID	<i>AFFIX LABEL HERE</i>	Sampling Time: _____ Sample Type: Field Sample Media : Soil	Sampling Method (if applicable): Grab or Composite # of Composites: _____ Sampling Depth: _____
Index ID	<i>AFFIX LABEL HERE</i>	Sampling Time: _____ Sample Type Media : Soil	Sampling Method (if applicable): Grab or Composite # of Composites: _____ Sampling Depth: _____
Index ID	<i>AFFIX LABEL HERE</i>	Sampling Time: _____ Sample Type Media : Soil	Sampling Method (if applicable): Grab or Composite # of Composites: _____ Sampling Depth: _____
Index ID	<i>AFFIX LABEL HERE</i>	Sampling Time: _____ Sample Type: Media : Soil	Sampling Method (if applicable): Grab or Composite # of Composites: _____ Sampling Depth: _____

COMMENTS:	
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Notes:**FS** Field Sample**SP** Field Split Sample**FD** Field Duplicate Sample**TB** Trip Blank Sample**MS** Matrix Spike Sample**MSD** Matrix Spike Duplicate Sample**FB** Field Blank Sample**EB** Equipment Decon Blank Sample**PE** Performance Evaluation Sample

Field Data Recorded by:		Field Entries Checked by:	
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Database Entry by:

Database QC by:

ATTACHMENT 3

Chain-of-Custody Form for Confirmation Soil Sampling.

DISTRIBUTION: PINK: Field Copy YELLOW: Return to Originator WHITE: Laboratory Copy